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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,510	01/27/2004	Dale E. Jamison	HES 2002-IP-007905U1	2516

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EXAMINER	
SUCHFIELD, GEORGE A	
ART UNIT	**PAPER NUMBER**
3676	

DATE MAILED: 03/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/765,510	JAMISON, DALE E.	
	Examiner	Art Unit	
	George Suchfield	3676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 December 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23 and 25* is/are rejected.

7)☒ Claim(s) *24* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/30/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. The use of the trademark "Viton" has been noted in this application in the specification at page 7, line 2 of Para [0031] . It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claim 1-9,13, 14, 16, 18, 19, 22, 23 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Watkins et al (2005/0284641).

Watkins et al (note the figures; Para's [0009], [0032], [0051], [0052]) discloses a process for using a treatment fluid in a subterranean formation, such as drilling a well penetrating a subterranean formation with a drilling fluid, wherein the treatment fluid possesses a density which varies, in one embodiment, as a function of pressure, by virtue of the inclusion of "variable pressure weighting material particles" in the treatment fluid, as broadly recited in claim 1.

The treatment fluid of Watkins et al is clearly employed in the manner set forth in claims 2-5 and 18.

As per claims 6 and 7, the process of Watkins et al is deemed to further inherently encompass the subsequent production of a mineral fluid(s), such as oil and/or gas, insofar as the myriad well treatment operations set forth in Watkins, such as drilling and formation stimulation, are for the ultimate purpose of providing or enhancing such fluid(s) production.

As per claim 8, the recited treatment fluid density of "about 6 lb/gallon to about 18 lb/gallon" is deemed encompassed by a corresponding range set forth in Watkins et al (Para [0038]) of 10 ppg - 24 ppg.

As per claim 9, the base fluid clearly comprises an oil or water medium.

As per claim 13, the variable density elements illustrated in Figures 1A-1C, 2A-2C, 4A and 4B, include a compressible gas, and which gas may comprise or include nitrogen, air and/or a noble gas (Para [0045]), as called for in claim 14.

As per claim 16, the compressible particles or elements of Watkins et al appear to completely rebound to their original shape in the absence of the applied pressure.

As per claim 19, the recited treatment fluid density variation range is deemed encompassed by a corresponding exemplary density range set forth in Watkins et al (Para [0038]) of 10 ppg - 24 ppg.

As per claim 22, the process of Watkins et al (note Para [0041]) appears to further include other additives in their well treatment fluid, such as a "fixed-density weighting agent".

The variable density elements or particles of Watkins et al appear to be formulated from one or more of the components set forth in claim 23.

As per claim 25, the treatment or drilling fluid of Watkins et al appears to function in the recited manner, i.e., no indication is set forth in Watkins et al that "kicks" will occur in their drilling process utilizing the variable density drilling fluid.

4. Claims 10-12, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watkins et al (2005/0284641).

While Watkins et al does not disclose a specific range(s) variable pressure weighting material particles, i.e. the "plurality of elements that change their volume/weight ratio in response to a condition of pressure" (Para [0009]) or inversely, the amount or range of base fluid present, Watkins et al does indicate that the relative amounts of such elements in the treatment fluid are determined "through appropriate engineering design". Accordingly, it would have been an obvious matter of choice or "engineering design" to one of ordinary skill in the art to which the invention pertains, to carry out the well treatment method of Watkins et al by utilizing a treatment fluid having a base fluid medium in the range recited in claim 10 based on, e.g., the actual formation encountered in the field and/or result of routine experimentation for process optimization.

Similarly, it would have been an obvious matter of choice or "engineering design" to one of ordinary skill in the art to which the invention pertains, to carry out the well treatment method of Watkins et al by utilizing a treatment fluid having a range of variable pressure weighting material particles, as recited in claim 11.

As per claim 12, it is deemed that the recited specific gravity range of the "elements" or pressure weighting material particles of Watkins et al would have been an obvious matter of choice or "engineering design" in carrying out the well treatment method of Watkins et al based on, e.g., the actual formation encountered in the field and/or result of routine experimentation for process optimization.

As per claim 15, it is noted that, in one embodiment, the variable pressure weighting material particles or elements of Watkins et al can withstand a pressure of at least 12,400 psi (Para [0038]). To utilize variable pressure weighting material particles or elements capable of

withstanding or functioning within a pressure of up to 21,000 psi in the process of Watkins et al would have been an obvious matter of choice or "appropriate engineering design" (Para [0032]) based on, e.g., the location and characteristics of the particular subterranean formation(s) actually encountered in the field.

As per claim 17, it is deemed that the recited temperature which the "elements" or pressure weighting material particles of Watkins et al can withstand would have been an obvious matter of choice or "engineering design" in carrying out the well treatment method of Watkins et al based on, e.g., the actual formation encountered in the field and/or result of routine experimentation for process optimization.

5. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watkins et al (2005/0284641) as applied to claim 1 above, and further in view of Boer (2002/0108782).

Boer (note the Abstract) discloses a method of drilling an offshore well utilizing a varying density drilling fluid.

Accordingly, it would have been obvious to one of ordinary skill in the art to which the invention pertains, to similarly carry out the drilling process of Watkins et al at an offshore location, i.e., into a subterranean formation located beneath the ocean floor, as taught by Boer, in order to realize even greater economic benefit and yield from the drilling and well completion process of Watkins et al, utilizing a variable density drilling fluid.

6. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

7. Claim 24 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Suchfield whose telephone number is 571-272-7036. The examiner can normally be reached on M-F (6:30 - 3:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Glessner can be reached on 571-272-6843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

George Suchfield
Primary Examiner
Art Unit 3676

Gs
February 23, 2006